

on the side with head up. Number three pupated July 11th, on the side of the box, head up; number four changed July 14th, suspended from the top the same as number one, all of them at an angle with the object to which they were attached, as is usual with *Papilios*. Numbers one and three produced imagines July 15th and 29th, or after a pupal period of fifteen and sixteen days respectively. August 4th, numbers two and three remained unhatched, having remained in this state thirty-six and twenty-four days, and they presented no indications of hatching. At this time I turned the box on its side, so that the heads were suspended downward instead of pointing upward. August 7th both produced perfect imagines.

Among my captures of *Catocalæ* this season in this vicinity, are *C. marmorata* Edw., *C. sappho* Streck., and *C. delilah* Streck., on white oak trees, the last June 29th, the second July 18th and 19th, and the first September 7th.

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## DESCRIPTIONS OF NEW ICHNEUMONIDÆ.

BY E. T. CRESSON, PHILADELPHIA, PA.

### Genus *MESOSTENUS* Grav.

*MESOSTENUS NUBILIPENNIS*.—♀. Black; anterior orbits, lower part of cheeks, spot on middle of face, most of clypeus and labrum, spot on mandibles, annulus on antennæ, line on sides of collar, spot on each side of prothorax above, spot on disk of mesothorax, most of scutellum, dot on post-scutellum, tegulæ, spot beneath, spot on sides of pleura, spot on each side behind posterior wing, two elongate marks on metathorax behind covering the prominent, obtuse and transversely compressed tubercles, the four anterior coxæ, spot on posterior pair above, annulus at base of posterior tibiæ, extreme base and apex of the first joint of posterior tarsi, the second, third and fourth joints entirely, and the apical margin of segments 1-6 of abdomen, all white; front unarmed; thorax opaque; mesothorax confluent punctured; metathorax reticulated; wings hyaline, with a fuliginous cloud beneath stigma, areolet quadrate, closed; legs fulvous, extreme tips of posterior femora, their tibiæ except white annulus near

base, most of basal joint of their tarsi, and the apical joint, black ; abdomen fusiform, rather shining, punctured, first segment considerably dilated at apex ; ovipositor shorter than abdomen. Length .30 inch.

*Hab.*—Georgia (Morrison). Very much like *albomaculatus* Cress., but readily distinguished by the fuliginous cloud on anterior wings.

MESOSTENUS CANDIDUS.—♂. Black ; orbits, face, clypeus, labrum, palpi, line on collar, spots on each side of prothorax above, two lines on mesothorax, scutellum, spot on post-scutellum, tegulæ, spot beneath, transverse line on sides of pleura, short line or spot beneath, curved spot behind each posterior wing, four spots on metathorax posteriorly, arranged in a transverse line, those on posterior face covering the short obtuse tubercles, four anterior coxæ and trochanters, base above and apex beneath of posterior coxæ, their tarsi except base and extreme tips, base and apex of first abdominal segment, and apical margin of second and following segments, all white ; front unarmed ; antennæ entirely black ; mesothorax confluent punctured, without distinct impressed lines ; metathorax reticulated ; wings hyaline, with an æneous gloss, areolet open ; legs fulvous, base beneath and apex above of posterior coxæ, extreme tips of their femora, their tibiæ except base, and extreme base and apex of their tarsi, black ; abdomen slender, smooth and polished, first segment slightly dilated at tip, the second much narrowed to base. Length .30 inch.

*Hab.*—New York (Comstock).

MESOSTENUS FORTIS.—♀. Black ; orbits, face except two spots above clypeus, clypeus, labrum, spot on mandibles, palpi, broad annulus on antennæ, line on collar, spot on each side of prothorax above, two lines on mesothorax, scutellum, spot on each side before on basal ridge, post-scutellum, tegulæ, dot beneath, longitudinal line on sides of pleura nearly confluent with a short curved line posteriorly and beneath, a line before each intermediate coxa, spot behind posterior wing, two spots on posterior face of metathorax covering the short blunt tubercles, a round spot on each flank, all the coxæ except tips of posterior pair above, four anterior trochanters, base of first abdominal segment, and narrow apical margin of all the segments above, all white ; front unarmed ; antennæ thickened beyond the middle ; mesothorax without distinct impressed lines, sparsely punctured, longitudinally striated on disk ; wings hyaline,

slightly dusky at tips, areolet open ; legs pale fulvous, tarsi paler, apex of posterior coxæ above black ; abdomen fusiform, shining, impunctured, first segment gradually dilated at tip ; ovipositor as long as the abdomen. Length .45 inch.

*Hab.*—New York (Comstock). This may prove to be the ♀ of *candidus*.

MESOSTENUS DILIGENS.—♀. Black ; orbits, very broad on cheeks beneath, face except medial spot, clypeus, base of mandibles, palpi, broad annulus on antennæ, collar, large spot on each side of prothorax above, two lines on mesothorax, scutellum, short oblique line on each side anteriorly, spot on post-scutellum, tegulæ, spot beneath, large spot behind each posterior wing, small one beneath, large oblique line on sides of pleura confluent with mark in front of intermediate coxæ, flanks of metathorax, two large sub-cuneiform marks on posterior face covering the short blunt tubercles, four anterior coxæ, first abdominal segment except black spot above near tip, spot on each basal corner of second segment, and broad apical margin of segments 2-6, all white ; front unarmed ; mesothorax with indistinct impressed lines ; wings hyaline, areolet open ; legs pale fulvous, tarsi paler, extreme tips dusky, posterior coxæ with white spot above ; abdomen fusiform, impunctured, first segment rather broadly dilated at tip ; ovipositor shorter than abdomen. Length .32 inch.

*Hab.*—Illinois (Lewis).

MESOSTENUS AUDAX.—♀. Black ; orbits, broad on cheeks beneath, sides and middle of face, most of clypeus, spot on mandibles, palpi, broad annulus on antennæ, line on collar, spot on each side of prothorax above, two short lines on disk of mesothorax, scutellum, spot on post-scutellum, tegulæ, spot beneath, oblique line on sides of pleura, smaller one immediately beneath, spot behind posterior wing, round spot on flanks of metathorax and two spots on posterior face covering the short blunt tubercles, all white or yellowish-white ; front unarmed ; mesothorax confluent punctured, with indistinct impressed lines ; metathorax rather coarsely reticulated ; wings hyaline, faintly yellowish, areolet open ; legs fulvous-yellow ; coxæ dull whitish, posterior pair tinged with fulvous, tarsi pale yellow, extreme tips dusky ; abdomen fusiform, impunctured, first segment and apical and lateral margins of remaining segments, dull whitish, sometimes more or less tinged with fulvous, especially the disk of post-petiole,

which is rather broadly dilated ; ovipositor shorter than the abdomen. Length .55 inch.

*Hab.*—Georgia (Ridings).

MESOSTENUS EXAPTUS.—♀. Black ; head and thorax marked exactly as in *audax*; front unarmed ; mesothorax rather sparsely punctured, the two impressed lines distinct only in front ; metathorax reticulated, broad and flat on posterior face, sub-pubescent ; the tubercles short and obtuse ; antennæ robust toward tips ; wings hyaline, slightly dusky at tips, areolet open ; legs fulvous-yellow, anterior coxæ and trochanters whitish, tarsi yellowish ; abdomen fusiform, shining, impunctured, apical margin of the segments narrowly whitish, the first segment, and anterior margin of the yellowish band on second segment, fulvous, post-petiole rather broadly dilated ; ovipositor a little longer than the abdomen. Length .32 inch.

*Hab.*—Massachusetts (Ridings).

MESOSTENUS SAUNDERSI.—♀. Black, shining ; anterior orbits interrupted on sides of face, short line on posterior orbits, spot on clypeus, palpi, annulus on antennæ, spot on scutellum, dot behind, the short blunt tubercles on metathorax, tegulæ, and dot beneath, all yellowish-white ; mesothorax sparsely punctured, without impressed lines ; metathorax broad, reticulated, flat on posterior face ; sides of pleura longitudinally excavated, polished ; wings hyaline, faintly dusky at tips ; areolet open ; legs fulvous, posterior tibiæ dusky at tips, tarsi pale yellowish, fuscous at extreme tips ; abdomen fusiform, shining, impunctured ; the first segment entirely, and broad apical margin of second segment, fulvo-ferruginous, apical margin of remaining segments narrowly whitish, interrupted on disk of third segment ; post-petiole rather broadly dilated ; ovipositor as long as the abdomen. Length .40 inch.

*Hab.*—Canada West (Mr. Wm. Saunders). In this species the head and thorax are almost entirely black.

MESOSTENUS LATICINCTUS.—♀. Black, opaque ; broad orbits, face, clypeus, mandibles except tips, palpi, broad annulus on antennæ, collar, broad line on each side of prothorax above, spot on disk of mesothorax, scutellum, large mark on each side behind posterior wings, spot beneath them, flanks of metathorax, two elongate marks on posterior face covering the prominent transversely compressed obtuse tubercles, tegulæ, dot

beneath, broad oblique mark on sides of pleura, confluent behind with a large mark covering almost entirely the under surface, four anterior coxae and trochanters, and broad band at tip of abdominal segments, all white; front unarmed; antennae long, sub-robust at tip; mesothorax very finely and densely punctured, metathorax more coarsely so; wings sub-hyaline areolet open; legs fulvous-yellow, posterior coxae with base beneath and apex above black, posterior tarsi yellow, fuscous at extreme tips; abdomen sub-fusiform, the base and apex shining, post-petiole gradually dilated; ovipositor about half the length of the abdomen. Length .35 inch.

*Hab.*—Louisiana (Lewis).

MESOSTENUS PROMPTUS.—♂. Black; anterior orbits broad on sides of face, clypeus, mandibles except tips, palpi, spot on each side of prothorax above, lateral carinae at base of scutellum, tegulae, four anterior coxae and trochanters beneath, and posterior tarsi except base and apex, white; sometimes the middle of the face is more or less white; antennae entirely black, slender at tips; front unarmed; mesothorax shining, sparsely punctured, the two longitudinal lines deeply impressed, the middle lobe prominent; metathorax with lateral carinae of posterior face sharply defined, but without prominent tubercles or spines; wings sub-hyaline, areolet sub-quadrate, closed; femora fulvo-ferruginous, four anterior tibiae and tarsi yellow; abdomen slender, sub-compressed at tip, fulvo-ferruginous, the three or four apical segments black. Length .35 inch.

*Hab.*—Canada (Pettit); Illinois (Lewis).

MESOSTENUS AMERICANUS.—♀. Black, shining; short line on upper anterior orbits, palpi obscurely, annulus on antennae, interrupted beneath, obscure line on each side of scutellum at base, and dot on tegulae, whitish; front unarmed; mesothorax with well impressed lines; metathorax rather coarsely sculptured, with a smooth polished space on each side at base, sides of posterior face with sharply defined carina, but without prominent tubercles or spines; wings sub-hyaline, areolet longitudinally sub-quadrate, closed; four anterior legs, except coxae and trochanters, and posterior femora ferruginous, posterior tibiae and tarsi fuscous, joints 2-4 of the latter occasionally more or less pale; abdomen narrow fusiform, shining, impunctured, ferruginous, apical segments sometimes dusky, first segment long, slender, apical third rather suddenly dilated and sub-quadrate; ovipositor as long as the abdomen. Length .30-.33 inch.

*Hab.*—Maine (Fernald); Virginia (Ridings). This has much the appearance of a small specimen of *Cryptus americanus* Cress.

MESOSTENUS MACILENTUS.—♂. Black; orbits broad on cheeks, clypeus, base of mandibles, palpi, line on collar, upper margin of prothorax interrupted medially, spot on disk of mesothorax, scutellum, spot behind each posterior wing, line on flanks of metathorax, two spots at tip above, tegulae, spot beneath, two spots on sides of pleura, the anterior one the largest (both sometimes wanting), and spot at base of all the coxae, all white; front unarmed; antennae entirely black; mesothorax prominently trilobed; metathorax unarmed, pubescent; wings more or less dusky, areolet minutely quadrate, closed; legs long and slender, fulvo-ferruginous, black line at base of posterior femora within, their tibiae and tarsi more or less dusky, the second and third joints of the latter more or less pale; abdomen long, slender, ferruginous, apical segments sometimes obfuscated; first segment long, linear, stigmata prominent. Length .40 inch.

*Hab.*—Illinois, Louisiana (Lewis); Texas (Heiligbrodt).

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## NOTES ON SEVERAL SPECIES OF COLEOPTERA, WITH SOME ACCOUNT OF HABITS, ETC.

BY CHARLES DURY, AVONDALE, HAM. CO., OHIO.

### *Meglodacne Ulkei* Crotch.

This pretty and interesting species, described by Mr. G. R. Crotch from a single specimen in the collection of Prof. Ulke, of Washington, D. C., who received it from Kentucky ten years ago, has remained unique in his collection until I found it, together with its larvæ and pupa.

Its food is fungus (*Polypora*) growing on logs. Its full-fed larvæ are  $\frac{7}{8}$  inch long, rather slender, of light color, with the head brown; it eats out a cavity in the fungus, and there transforms to a pupa, which is of a pale flesh color. When the beetle first hatches from the pupa it is of a very light pinkish color, without any markings whatever. When it hardens it